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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,957	03/22/2007	Hakan Holmberg	47113-5069-00-US	5279

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WASHINGTON, DC 20005-1209

EXAMINER

ZIMMERMAN, JOHN J

ART UNIT	PAPER NUMBER
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1784

NOTIFICATION DATE	DELIVERY MODE
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09/09/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DBRIPDocket@dbr.com
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Office Action Summary	Application No. 10/577,957	Applicant(s) HOLMBERG, HAKAN	
	Examiner John J. Zimmerman	Art Unit 1784	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12 and 14-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12 and 14-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 5/2/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

SECOND OFFICE ACTION

Amendments

1. This Second Office Action is in response to the correspondence titled "AMENDMENT UNDER 37 C.F.R. 1.111" received July 9, 2010. Claims 12 and 14-16 are pending in this application.

Claim Rejections - 35 USC § 102/103

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(d) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 12 and 14-16 are rejected under 35 U.S.C. 103(a) as obvious over Vyas (U.S. 2003/0228512 A1).

5. Vyas '512 discloses using ion-assisted etching to remove the oxides from the surface of a stainless steel strip and depositing a coating that has excellent adhesion and relatively "uniform coverage" (e.g. see paragraph [0056]). The coating is applied by electron beam evaporation (e.g. see paragraph [0061]) and can be noble metals such as Ru, Rh, Pd, Ag, Ir, Pt and Os, but is preferable Au (e.g. see paragraph [0008]). The coating is less than 100 nm thick (e.g. see paragraph [0009], claim 1) and thus overlaps the thickness range of applicant's claim 12. Therefore, it would have been prima facie obvious to one of ordinary skill in the art to use coating thicknesses over this entire range since Vyas discloses that this range is encompassed by his invention. In addition, in view of the function of the noble metal layer as an electrically conducting, oxidation resistant and acid resistant coating (e.g. see paragraph [0035]), it would also have been obvious to one of ordinary skill in the art at the time the invention was made to use thicker coatings than those disclosed by Vyas in order to further improve the conductivity, oxidation resistance and acid resistance if economically viable for a particular end use.

Regarding claim 16, although Vyas uses 316L stainless steel in the examples (e.g. see paragraph

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[0060]), it would have been obvious to one of ordinary skill in the art at the time the invention was made to select any stainless steel for the substrate that would have suitable corrosion resistant and structural properties. A review of applicant's disclosure shows no patentable distinction for ASTM 301 stainless steel over any other stainless steel.

6. Claims 12 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Hashimoto (U.S. Patent 4,999,259).

7. Hashimoto discloses ion-assisted etching the surface of stainless steel to remove surface oxides and then using electron beam evaporation to deposit a chromium layer in a thickness of from 0.01 to 1 μm (e.g. see Example 3; column 3, lines 1-34; column 3, lines 64-68). Specific coating thicknesses can be found in Tables 2 and 3 (e.g. 0.1 μm , 1 μm).

8. Claims 12, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto (U.S. Patent 4,999,259).

9. Hashimoto discloses ion-assisted etching the surface of stainless steel to remove surface oxides and then using electron beam evaporation to deposit a chromium layer in a thickness of from 0.01 to 1 μm (e.g. see Example 3; column 3, lines 1-34; column 3, lines 64-68). Specific coating thicknesses can be found in Tables 2 and 3 (e.g. 0.1 μm , 1 μm). Therefore, it would have been prima facie obvious to one of ordinary skill in the art to use coating thicknesses over this entire range since Hashimoto discloses that this range is encompassed by his invention.

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Regarding claim 16, although Hashimoto uses SUS 430 stainless steel in the examples (e.g. see Table 3), it would have been obvious to one of ordinary skill in the art at the time the invention was made to select any stainless steel for the substrate that would have suitable corrosion resistant and structural properties. A review of applicant's disclosure shows no patentable distinction for ASTM 301 stainless steel over any other stainless steel.

Response to Arguments

10. Applicant's arguments with respect to claims 12 and 14-16 have been considered but are moot in view of the new grounds of rejection. The new grounds of rejection were necessitated by the amendments to the claims which now require ion assisted etching to remove oxides from the surface of the stainless steel and depositing a layer of metal in a thickness of about 0.05 to about 15 μm using an electron beam evaporation process (e.g. claim 12, lines 1-5). The new rejections clearly show that the claimed process is not patentably distinct from processes found in the prior art.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additional prior art made of record serves to further establish the level of ordinary skill in the art. Hoffman (U.S. Patent 4,882,022) uses ion etching to clean a stainless steel substrate before depositing a 1 μm layer of gold on the surface (e.g. see Example 2). Ito (JP 63-79955) uses ion etching to clean the oxides from the surface of stainless steel before using

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sputtering, ion plating, plasma CVD, etc., to apply Pb, Sn, Ni, Cu, Au, Ag and PT coatings (e.g. see abstract).

12. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

13. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John J. Zimmerman whose telephone number is (571) 272-1547. The examiner can normally be reached on 8:30am-5:00pm, M-F. Supervisor Jennifer McNeil can be reached on (571) 272-1540. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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15. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John J. Zimmerman
Primary Examiner
Art Unit 1794

/John J. Zimmerman/
Primary Examiner, Art Unit 1794

jjz
September 1, 2010